# Subject Index

Adenosine, direct negative inotropic effect, regulation by protein kinase C and prostacyclin, 343

Alpha-linolenic acid supplementation, effect on LCPo3 status of vegans, 287

Antioxidants: effects of combined conventional treatment, oral antioxidants and EFAs on sperm biology in subfertile men, 159

Apoptosis, HT-29 colon cancer cells, induction by docosahexaenoic acid, 301

Arachidonic acid (AA)

COX and LOX metabolites, effect on platelet activation and procoagulation induced by cancer cells, 377

metabolism in liver cells, stimulation by lactacystin, 371 release from cells in cultures, effect of combination of lactacystin and 12-O-tetradecanoylphorbol-13-acetate, 363

suggested adverse effects, 131, 145

supplementation, effect on plasma and erythrocyte fatty acids of pregnant women, 323

Attention-deficit/hyperactivity disorder (ADHD)

fatty acid metabolism in, 1

potential role of fatty acids, 79

Autism, prenatal origins, post-natal course and educational support, 41

Autistic spectrum disorders

diagnostic problems, 33

fatty acid metabolism, 1

red blood cell fatty acid compositions, 21

# Cancer

doxosahexaenoic acid in induction of apoptosis in HT-29 colon

modulation of platelet activation and procoagulation by COX and LOX eicosanoids, 377

opposing effects of PGE2 and F2x on rat-liver associated natural killer cell activity, 153

Cardiovascular disease, beneficial effect(s) of n-3 fatty acids, 351

Ceramide: simultaneous measurement of ceramide and phospholipase D activity, 187

### Coagulation

intermittent claudication, effects of prostaglandin E1, 271

modulation by COX and LOX eicosanoids of procoagulation induced by cancer cells, 377

Cognitive development in infants, role of long-chain polyunsaturated fatty acids, 95

Colon cancer, doxosahexaenoic acid in induction of apoptosis in HT-29 cells, 301

Coordination disorder, developmental see Dyspraxia

Cyclooxygenase-2 (COX-2), gastric mucosa, effect of Helicobacter pylori eradication, 315

Cyclosporine-induced nephrotoxicity, effect of nifedipine, 263

Diabetes, effect on fatty acid composition of microsomal lipids, 167

comparison of PUFA status in vegans and omnivores, 279 essentiality of and recommended intakes for omega-6 and omega-3 fatty acids: workshop statement, 119

commentaries on, 123, 125, 127, 131, 135, 139, 145

fatty acid intake and total phospholipid fatty acid profile in keloid patients, 247

sodium restriction, effect on urinary prostaglandin excretion in pregnancy, 209

visual reponse in malnutrition and, 385

#### Docosahexaenoic acid

apoptosis induction in HT-29 colon cancer cells, 301

supplementation, effect on plasma and erythrocyte fatty acids of pregnant women, 323

#### Dyslexia

fatty acid deficiency signs

adults, 75

children, 69

fatty acid metabolism abnormalities, 1

visual function and, 89

genetic factors: sibling-pair based approach for mapping genetic loci, 27

increased levels of cytosolic phospholipase A2, 37

Dyspraxia, fatty acid metabolism in, 1

# E

Endothelin, role in effect of nifedipine in cylosporine-induced nephrotoxicity, 263

Erythrocytes see Red blood cells

Essential fatty acids see under Fatty acids

# F

# Fatty acids

in breast milk

correlation between content of intermediate chain-length fatty acids and copper, 203

influence on conservation of nutritional status and intermediate chain-length fatty acids, 195

deficiency signs in dyslexia

adults, 75

children, 69

dietary intake, and total phospholipid fatty acid profile in keloid

dietary long-chain, and visual response in malnourished nursing infants, 385

effect of supplementation with docosahexaenoic and arachidonic acid on plasma and erythrocyte fatty acids of pregnant women,

## essential (EFAs)

conservation in breast milk, influence of nutritional status and intermediate chain-length fatty acids, 195

effects of combined conventional treatment, oral antioxidants and EFAs on sperm biology in subfertile men, 159

keloid formation and prevention, 237

### metabolism

diagnostic aids for abnormalities in neurodevelopmental disorders,

neurodevelopmental disorders, 1, 65

schizophrenia and other psychiatric disorders: related gene targets,

microsomal lipids, effect of diabetes, 167

omega-6 and omega-3, essentiality and recommended dietary intakes: workshop statement, 119

commentaries on, 123, 125, 127, 131, 135, 139, 145

polyunsaturated

beneficial effect(s) of n-3 PUFAs in cardiovascular disease, 351 effect of extract of Ginkgo biloba on circulating and cellular

status in Dutch vegans and omnivores, 279

polyunsaturated long-chain

effect of short-term supplementation of low-dose GLA, ALA or GLA plus ALA on LCPω3 status of vegans, 287

role in infant cognitive development, 95

potential role in attention-deficit/hyperactivity disorder, 79 red blood cells of patient with autistic spectrum disorder, 21 Fibrinolysis, intermittent claudication, effects of prostaglandin E1,

### G

Gamma-linolenic acid (GLA) supplementation, effect on LCPω3 status of vegans, 287

Garlic, acqueous extract, effect of intravenous dose on serum thromboxane-B2 levels, 217

Ginkgo biloba extract (EGb 761), effect on circulating and cellular profiles of polyunsaturated fatty acids, 293

Glucose metabolism, effect of insulin, uteri of ovariectomized and non-ovariectomized underfed rats, 337

#### H

Helicobacter pylori eradication, effect on expression of cyclooxygenase-2 and nitrotyrosine in gastric mucosa, 315

HIV-1 infection, association of Lp(a), PGI2-synthesis stimulating plasma factor, biological half-life of PGI2 and high-density lipoproteins, 309

Infertility: effects of combined conventional treatment, oral antioxidants and EFAs on sperm biology, 159

Inflammation, effect on prostanoid receptors in intestinal epithelium, 223

Insulin, influence on metabolism of glucose in uteri of ovariectomized and non-ovariectomized underfed rats, 337

Intermittent claudication, hemostasis and fibrinolysis in, 271 Isoprostanes: radiological measurement of F2-isoprostanes after hydrolysis of lipids in tissues, 149

Keloids in rural black South Africans

dietary fatty acid intake and total phospholipid fatty acid profile,

lipid model for prevention and treatment, 255

overview and essential fatty acid hypotheses for keloid formation and prevention, 237

# L

Lactacystin

combined with 12-O-tetradecanoylphorbol-13-acetate, effect on release of archidonic acid from cells in cultures, 363 stimulation of arachidonic acid metabolism in liver cells, 371

Language impairment, specific see Specific language impairment Linolenic acid

suggested adverse effects, 131, 145

supplementation, effect on LCPω3 status of vegans, 287

Lipoprotein(a) (Lp(a)): association of Lp(a), PGI2-synthesis stimulating plasma factor, biological half-life of PGI2 and high-density lipoproteins in HIV-1 infection, 309

Lipoproteins

high-density: association of Lp(a), PGI2-synthesis stimulating plasma factor, biological half-life of PGI2 and high-density lipoproteins in HIV-1 infection, 309

low-density (LDLs)

glycation and oxidation, 177

synergistic action between TXA2 and mildly oxidized LDL on vascular smooth muscle cell, 329

Malnutrition of nursing infants, dietary long-chain fatty acids and visual response, 385 Milk, breast, fatty acids in see Fatty acids, in breast milk

Natural killer (NK) cells: opposing effects of PGE<sub>2</sub> and  $F_{2\alpha}$  on rat-liver associated natural killer cell activity, 153

Neurodevelopmental disorders

comorbidity, 1, 61

epidemiology in children, 11

fatty acid metabolism in, 1

diagnostic aids for abnormal metabolism, 65

oxidative stress and, 61

Nifedipine, effect in cyclosporine-induced nephrotoxicity, 263

Nitrotyrosine, gastric mucosa, effect of Helicobacter pylori eradication, 315

Nutrition

dietary long-chain fatty acids and visual response in malnourished nursing infants, 385

effect on conservation of essential fatty acids in breast milk,

### 0

Onion, acqueous extract, effect of intravenous dose on serum thromboxane-B2 levels, 217

Oxidative stress, neurodevelopmental disorders and, 61

# P

Phospholipase D: simultaneous measurement of ceramide and phospholipase D activity, 187

Phospholipid metabolism

neurodevelopment disorders and, 1

increased levels of cytosolic phospholipase A2 in dyslexics, 37 schizophrenia and other psychiatric disorders: related gene targets,

Plasma factor: association of Lp(a), PGI2-synthesis stimulating plasma factor, biological half-life of PGI<sub>2</sub> and high-density lipoproteins in HIV-1 infection, 309

Platelet activation by cancer cells, modulation by COX and LOX eicosanoids, 377

Polyunsaturated fatty acids (PUFAs) see under Fatty acids

effect of supplementation with docosahexaenoic and arachidonic acid on plasma and erythrocyte fatty acids, 323

urinary prostaglandin excretion, effect of dietary sodium restriction, 209

Prostacyclin see Prostaglandin I2

Prostaglandins

opposing effects of  $PGE_2$  and  $F_{2\alpha}$  on rat-liver associated natural killer cell activity, 153

urinary, excretion in pregnancy: effect of dietary sodium restriction, 209

Prostaglandin E1, effects on hemostasis and fibrinolysis in intermittent claudication, 271

Prostaglandin I<sub>2</sub>

association of Lp(a),  $PGI_2$ -synthesis stimulating plasma factor, biological half-life of  $PGI_2$  and high-density lipoproteins in HIV-1 infection, 309

regulation of direct negative inotropic effect of adenosine, 343 Prostanoid receptors, intestinal epithelium, 223

Protein kinase C, regulation of direct negative inotropic effect of adenosine, 343

Psychiatric disorders, gene targets related to phospholipid and fatty acid metabolism, 47

### R

Reading difficulties neurobiology, 109 see also Dyslexia

Red blood cell fatty acids

patient with autistic spectrum disorder, 21

pregnant women, effect of supplementation with docosahexaenoic and arachidonic acid, 323

### S

Schizophrenia, gene targets related to phospholipid and fatty acid metabolism, 47

Smooth muscle, vascular see Vascular smooth muscle cell

Sodium, dietary restriction, effect on urinary prostaglandin excretion in pregnancy, 209

Specific language impairment, genetics, 101

Sperm biology, effects of combined conventional treatment, oral antioxidants and EFAs, 159

#### T

12-O-tetradecanoylphorbol-13-acetate combined with lactacystin, effect on release of archidonic acid from cells in cultures, 363

Thromboxane, role in effect of nifedipine in cylosporine-induced nephrotoxicity, 263

Thromboxane-A<sub>2</sub> (TXA<sub>2</sub>): synergistic action between TXA<sub>2</sub> and mildly oxidized LDL on vascular smooth muscle cell. 329

Thromboxane-B<sub>2</sub> (TXB<sub>2</sub>), serum levels following intravenous dose of extract of garlic and onion, 217

#### V

Vascular smooth muscle cell, synergistic action between thromboxane  $\rm A_2$  and mildly oxidized low density lipoprotein, 329

Vegans, polyunsaturated fatty acid status, 279

effect of short-term supplementation with low-dose GLA, ALA or GLA plus ALA on LCP $\omega$ 3 status, 287

Visual function, fatty acids and, relation to dyslexia, 89

Visual response, malnourished nursing infants, dietary long-chain fatty acids and, 385

# **Author Index**

Forsyth, J.S., 95 A Francks, C., 27 Alaniz, M.J.T. de, 385 Ali, M., 217 G Ali, Z., 315 Galli, C., 127 Garda, H.A., 167 B Glen, A.C.A., 37 Glen, A.I.M., 37 Bärtsch, P., 271 Glew, R.H., 195, 203 Basu, S., 149 Goldraij, A., 337 Bell, J.G., 21 Bemelmans, W.J.E., 279 Benassayad, C., 293 Benedict, C.R., 329 H Bennett, C.N., 47 Hall, J.A., 69, 75 Bernasconi, A.M., 167 Haourigi, M., 293 Boyle, R.M., 37 Hasperhoven, M.B., 279, 287 Brenner, R.R., 167 Hassid, J., 293 Brouwer, D.A.J., 279, 287 Hebb, G., 69 Hébert, R.L., 187 Hendrich, S., 153 C Hettema, Y., 279 Higgins, C.J., 75 Calvin, C.M., 69, 75 Hori, M., 315 Campos, L.M., 337 Hornstra, G., 323 Casalino-Matsuda, S.M., 337 Horrobin, D.F., 37, 47, 145 Chen, Z.Y., 301 Huang, Y.-S., 195, 203 Christophe, A.B., 159 Chuang, L.-T., 195 Clisby, C., 69 Cohen, W., 101 I Comhaire, F.H., 159 Iijima, H., 315 Cosme, R., 223 Istfan, N.W., 301 Cowie, H., 101 Crawford, M.A., 131 Cunnane, S.C., 139 Cunnick, J.E., 153 Jagt, D.J. Vander, 195, 203 Jones, G.S., 33 D Jongsma, H.W., 209 Dannhauser, A., 247 Darlametsos, I.E., 263 Das, U.N., 351 Delemarre, F.M.C., 209 Kakiuchi, Y., 315 Katagiri, T., 329 Kawai, N., 315 Depuydt, C.E., 159 Dhooge, W.S., 159 Dick, J.R., 21 Kawano, S., 315 Drieu, K., 293 Kimura, A., 315 Kleine, L., 187 Knox, E., 195 Koba, S., 329 Kritz, H., 309 Easton, T., 75 Efthimiou, Y., 309 Eynard, A.R., 377 I. Lands, W.E.M., 125 F Leaf, A., 119 Levine, L., 363, 371 Fisher, S.E., 27 Linares, J.A., 337 Fokkema, M.R., 279, 287 Little, J., 11

Liu, G., 187 Liu, H., 153 Louw, L., 237, 247, 255 Lublin, D., 223 Lynch, K., 223

### M

McDaid, A.M., 75
Macdonald, D.J., 37
MacDonell, L.E.F., 37
Maclean, A., 101
Mahmoud, A.M.A., 159
Manzo, P., 377
Marin, M.C., 385
Marlow, A.J., 27
Martini, I.A., 287
Menzel, J., 177
Millson, M., 203
Mohn, C.E., 377
Monaco, A.P., 27
Montgomery, P., 69
Muskiet, F.A.J., 279, 287
Mustafa, T., 217

### N

Najemnik, C., 309 Nasir, J., 101 Nishimura, Y., 315 Nunez, E.A., 293

# 0

P

O'Hare, A., 101 Okuda, Y., 315 Oriji, G.K., 343 Otto, S.J., 323

Pakala, R., 329 Papanikolaou, E.N., 263 Pasqualini, M.E., 377 Pedersolí, L.C. Petiti, J.P., 377 Puri, B.K., 79

# R

Rapin, J.R., 293 Regele, S., 271 Rey, G.E., 385 Richardson, A.J., 1, 27, 69, 75, 79, 89 Roche, J.K., 223 Rodrigo, M.A., 385 Ross, M.A., 1, 61

### S

Salem, N. Jr., 119
Sargent, J.R., 21
Sasaki, Y., 315
Sawaoka, H., 315
Schoenheimer, D.R., 69
Seckl, J., 101
Shatima, D., 195
Shores, J.T., 203
Simopoulos, A.P., 119, 123
Sinclair, A.J., 135
Sinzinger, H., 177, 309
Skinner, F.K., 37
Sobal, G., 177
Södergren, E., 149
Stamatopoulos, J., 309
Steegers, E.A.P., 209
Stein, J.F., 27, 69

## T

Takafuji, V., 223 Talcott, J.B., 69 Taylor, K.E., 75, 89 Thomas, C.M.G., 209 Thomson, M., 217 Tocher, D.R., 21 Trevarthen, C., 41 Tsuji, S., 315 Tsujii, M., 315

### V

van den Berg, R.J., 209 van Houwelingen, A.C., 323 Vander Jagt, D.J., 195, 203 Varonos, D.D., 263 Velich, T., 271 Vessby, B., 149 Vranckx, R., 293

# W

Ward, P.E., 37, 65 Watanabe, T., 329 Watson, J., 101 Weiss, C., 271 Weiss, T., 271 Westwood, E., 69 Willatts, P., 95

# Y

Yasumaru, M., 315 Yoa, R.G., 293

Z

Zalata, A.A., 159



